

25 February 1955

MEMORANDUM FOR THE FILES

SUBJECT: Notes on Meeting 16 February on Photographic Equipment

1. The meeting was held at the offices of Dr. Edwin Land at the Polaroid Corporation, Cambridge, Massachusetts. Present were: Dr. Land, Col. Ritland, Ed Martin (Lockheed), Dr. Rod Scott (Perkin-Elmer), Dr. James Baker, Allen Latham, Art Lundahl, Dr. Ed Furcell (part time) and Herbert Miller.

2. The items presented for discussion at the opening of the meeting were:

(a) The K-38 camera -- is it desirable to standardize on the 24" lens or the 36" lens or should we continue manufacture of both types for the A configuration.

(b) The 12" split vertical cameras in the original A-1 and A-2 configurations defined in the James Baker memorandum of 14 January 1955 -- is it desirable to retain these cameras.

(c) The K-17 trimet arrangement in the A-1 configuration.

(d) The charting camera -- what is the present status and plan for use.

(e) The B configuration -- what is the present status and plan for use.

(f) The C configuration -- what is the present status and plan for use.

(g) Periscopes.

(h) Summary of numbers.

(i) Miscellaneous items including light weight film development, electronic requirements for photographic configurations.

(j) Proposed meeting for 10 March.

3. The above items were discussed in detail. It was noted initially that the photographic equipment configurations listed by Baker in his

25X1

TS

Copy 1 of 3

25X1

- 2 -

14 January memorandum mentioned above led to several difficulties principally in the A configurations. The various subconfigurations specified resulted in an extremely difficult procurement problem in view of shortages in Air Force stocks. Logistics and field maintenance problems were also multiplied and finally weight considerations dictated some simplification. It was finally agreed that the split vertical pair in the A-1 and A-2 configurations would not provide sufficient improvement over the mapping trimet cameras to warrant their inclusion. It was concurrently agreed that elimination of the 36" lens requirement for the K-17 camera would substantially simplify procurement and manufacturing problems. It was still further agreed that the use of 9 $\frac{1}{2}$ " film in the C configurations introduced vibration problems which could not be overcome without a considerable development program.

4. As a consequence of the above decisions the photographic configurations are now defined as:

A-1 A unit consisting of a mounting frame supporting:

- In Bay 1. A single K-38 camera with 24" lens at f/8 with IMC and rocking drive for one left oblique, vertical and one right oblique, A8-B magazine (2000 ft. 3 mil film)
- In Bay 2. A pair of fixed oblique K-17C cameras with 6" Metrogon T lenses at f/8 with precision A9-B magazines (800 ft of 3 mil film)
- In Bay 3. A fixed vertical K-17C camera with 6" Metrogon T Lenses at f/8 with precision A9-B magazine (800 ft of 3 mil film) and programmer and exposure cycling control.

A-2 A unit consisting of a mounting frame supporting:

- In Bay 1. A fixed right oblique K-38 camera with 24" lens at f/8 with IMC, A8-B magazine.
- In Bay 2. An identical camera fixed right oblique
- In Bay 3. An identical camera fixed vertical, an exposure cycling control and a charting camera.

- b A unit consisting of a camera with 36" f/10 lens, IMC, magazine for 10,000 feet. of 3 mil film for 18x18 inch format, CG anti-vibration support, special shutter in non-recoil mount and programmed for 7 oblique positions and vertical; a programmer and exposure cycling control; a mini-vib unit; an automatic exposure control; and a charting camera.

- 3 -

- C A unit, consisting of a camera with a long focal length optical system, IMC, magazine for 5300 ft. of 3 mil film for 18x18 format, CG anti-vibration support, drive for oblique scan, a mini-vib unit, an automatic exposure control and a charting camera.

5. The numbers of configurations of each type were agreed as follows:

A-1. Four per base for three bases.

A-2. Two per base for three bases.

B. One per base for four bases.

C. One per base for four bases.

6. In discussion on the periscope, Col. Ritland noted that the periscope could be used as a drift indicator to help the pilot in his navigation and he strongly recommended that periscopes should be procured for possible inclusion in all aircraft. It was therefore agreed that 20 periscopes would be procured.

7. Charting cameras discussion lead to the conclusion that while 16 appeared to be required, a total of 20 would be ordered because of the great versatility of the camera. Mr. Scott noted that Perkin-Elmer would be in a position to dispose of all charting cameras excess to the needs of the project.

8. Delivery schedules would have to be revised in view of the simplification of the equipment program. It was believed possible to have all of the A configurations delivered by December 1955. The first unit of the B configuration would be ready by the end of September 1955 and the complete delivery by May 1956; the first unit of the C configuration by December 1955 and complete delivery by the end of May 1956; charting cameras first unit by the end of August 1955 and complete delivery early in 1956; the periscope first unit by July 1955 and complete delivery by January 1956. It was also noted that in view of the scaled down engineering effort represented by the revised photographic equipment requirements, work on the B and C configurations might be accelerated so that earlier delivery dates might be possible.

9. Window requirements were discussed and it was agreed that new requirements would be prepared within the next two weeks and forwarded to Lockheed.

10. On electronic equipment, the requirements were agreed to include only a record of what exposures were made at what time during the flight and exposure control unit for the B configuration as well as a servo mechanism for the C configuration installation.

TS ☐  
Copy 1 of 3

25X1

- 4 -

11. The complete complement of equipment for each of three bases plus one set in reserve was summarized to include:

- 4 boxes containing A-1's
- 2 boxes containing A-2's
- 1 box containing B
- 1 box containing C
- 1 box containing a spare bottom each for A-1, A-2, B and C
- 1 box containing a spare charting camera
- 1 box containing a spare periscope
- 1 box containing preflight checkout equipment (self powered)
- 1 maintenance and repair trailer
- 1 test sample processing and evaluation trailer
- 1 film storage and magazine loading room trailer
- 1 loose spare parts and equipment storage trailer
- 1 tractor with power unit
- 1 hoist for installing configuration in aircraft

12. Dr. Land noted he would be able to report on the light weight film sets in detail by 15 March. Mr. Latham was to undertake a study of the processing laboratory problem. Agreement was reached on the 10th of March date as being feasible for a meeting in Washington.

*7m*  
HERBERT I. MILLER

HIM:mah

Orig - HIM subj  
cc - HIM chrono  
cc - DEA

TS 103268  
Copy 1 of 3